

**Research Methods in Psychology  
Winter 2020**

**PSY300, Section: 03, CRN: 34057, 3 credit hours  
MWF, 12:00 to 12:50pm, LOCATION: Mackinac Hall, room A2165**

**Professor:** Thomas J. Coleman III  
**Office:** 2115 Au Sable Hall  
**E-mail:** colemath@gvsu.edu  
**Phone:** 616-331-8514

**Office Hours:** \*MW 1:00 to 2:50pm (and by appointment).

Appointments must be made via email using your GVSU email account. Students with appointments will be given priority during office hours. Please indicate the reason for your visit in the email. \*Through January 6<sup>th</sup> to April 17<sup>th</sup>

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**Course Description:** A general introduction to research methods in psychology. This course will prepare you to become a critical consumer of psychological research. Topics covered include theory development and hypothesis testing; measurement; reliability and validity of methods; experimental, quasi-experimental, and survey research designs; biases in experimentation; inferential and descriptive statistics; and research ethics.

**Learning Objectives:** The aim of this course is to acquaint students with basic research methods in psychology while exploring practical, theoretical, and ethical issues regarding research design and its implementation in psychology. Upon successful completion of this course students will be able to: (1) analyze the writing of a [lab report/case study/peer reviewed article]: identifying the author's target audience, purpose, tone, context, and the ways the textual form and style achieves its function. (2) demonstrate an effective scientific writing process. (3) identify the strengths and weaknesses of their own writing processes. (4) design an empirical study consistent with the standards of psychological science.

**SWS:** This course is designated SWS. Completion of WRT 150 with a grade of C or better (not C-) is a prerequisite. SWS credit will not be given to a student who completes this course before completing the prerequisite. SWS courses adhere to certain guidelines. Students turn in a total of at least 3000 words of writing. Part of that total may be essay exams, but a substantial amount of it is made up of essays, reports, or research papers. The instructor works with the students on revising drafts of papers, rather than simply grading the finished piece of writing. At least four hours of class time will be devoted to writing instruction. At least one third of the final grade in the course is based on the writing assignments. Students must complete the course with a grade of "C" or better in order to receive SWS credit.

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The Fred Meijer Center for Writing, with locations at the Allendale and Pew/Downtown Grand Rapids campuses, is a peer service available to assist you with writing for any of your classes. Writing consultants, who are fellow GVSU students, are trained to help you with all stages of your writing process, from brainstorming to organizing to editing your papers. Simply bring an idea, prompt, or draft of your paper along with the assignment sheet to any of the Center's locations. Also, through your Gmail account, you have access to online consultations through Google Docs. The Center's services are free, and you can drop in and work with a consultant or make an appointment, either through our website or by calling the Center (331-2922). Peer support is available for research and speech/presentation through the Knowledge Market, where the Writing Center partners with the Speech Lab and the Peer Research Center. Additional information about the [Knowledge Market](#) and Writing Center services and locations can be found on our [website](#).

**Instructor's Note:** To complete this course successfully, you should come to class having completed the assigned homework and having read the assigned material. Class lectures and discussions are primarily meant to supplement the textbook. This means that while lectures will generally follow the structure and content in your book, I will not be regurgitating the text back to you. In other words, the lectures are a chance to extend and enhance your knowledge of research methods in psychology beyond what you see in print.

**Course Prerequisites:** PSY 101, STA 215, and WRT 150. You may not take any of these prerequisite courses concurrently with PSY 300.

**Required Text:** Jhangiani, R., Chiang, I., Cuttler, C., & Leighton, D. (2019). *Research Methods in Psychology* (4th ed.).

**\*\*Note that this is an Open Access textbook, and copies are freely available online by downloading from this link: <https://kpu.pressbooks.pub/psychmethods4e/> (i.e., you don't have to purchase a physical copy of the book!). I have done this to save you money and to stymie the further corporatization of academia.**

If you'd like a physical copy of the book: [https://www.amazon.com/Research-Methods-Psychology-Rajiv-Jhangiani/dp/1085976920/ref=zg\\_bsnr\\_69832\\_1?encoding=UTF8&psc=1&refRID=VRK0Q98ZJTDFTR4RA7CQ](https://www.amazon.com/Research-Methods-Psychology-Rajiv-Jhangiani/dp/1085976920/ref=zg_bsnr_69832_1?encoding=UTF8&psc=1&refRID=VRK0Q98ZJTDFTR4RA7CQ)

Any research articles and supplemental readings used will be posted on BlackBoard.

**Recommended Text: (Assignments to be in APA format)**

American Psychological Association (2010). *Publication Manual of the American Psychological Association*. (6<sup>th</sup> ed). Washington, DC: Author.

*Copies are available in the Zumberge:* BF76.7 .P83 2010

**\*You might be able to find copies of this online, but please DO NOT use pocket or non-APA**

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published versions of this manual. Most have a number of mistakes (this includes some guides that are assigned in writing classes).

**Grade Evaluation:** Semester grades will be based on 4 exams, 4 out of class mini assignments, a research proposal draft with 4 assignments related to the research proposal, and final copy of the research proposal. There may be opportunities to receive extra credit through completing assignments available throughout the semester. The exams will be based directly on your book material unless otherwise notified, with the possibility of bonus questions coming from lectures. Therefore, in addition to participating in class, reading the book is critically important.

Assignment		Points Possible	Points Earned
EXAM 1		50	
EXAM 2		50	
EXAM 3		50	
EXAM 4		50	
ASSIGNMENT 1		40	
ASSIGNMENT 2		40	
ASSIGNMENT 3		80	
ASSIGNMENT 4		40	
Research Proposal Draft	Brief proposal	10	
	Introduction / lit review	40	
	Proposed method	40	
	Abstract	10	
Research Proposal Final Copy		100	
<b>Total</b>		<b>600</b>	

Points	Percent	Letter Grade
558+	93.00-100%	A
540-557.99	90.00-92.99%	A-
522-539.99	87.00-89.99%	B+
498-521.99	83.00-86.99%	B
480-497.99	80.00-82.99%	B-
462-479.99	77.00-79.99%	C+
438-461.99	73.00-76.99%	C
420-437.99	70.00-72.99%	C-
402-419.99	67.00-69.99%	D+
360-401.99	60.00-66.99%	D
<360	60% and below	F

**Missed Exam/Assignment:** As many of you do not have adequate health coverage, I do not require health certificates for absences for missed classes. However, if you miss more than 1 scheduled exam or homework, I may require that you to provide a certificate from a certified health professional. *If you miss an exam, you must report your illness to me via email within 48 hours of the exam/assignment due date.* In the case of a missed exam you will need to schedule a make-up exam with me immediately, and at my convicence. Late assignments will receive a 5% penalty for each day late. Late work will not be accepted if it is turned in more than one week from the assigned due date unless otherwise approved by the professor.

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**Missed Class:** I do not take attendance. Please do not email me just to say you missed or will miss a normal class period. This is a university level course and you are adults. While I both appreciate and encourage attendance, I consider this to be a choice that you should feel free to make relative to your life circumstances. Sometimes emergencies happen...I don't feel as though you should be punished for this. That said, you will likely find that in order to do well on my exams, and in the research paper, attendance and a fair amount of studying will be necessary. I do ask that if you miss class for a non-legitimate reason that you do not add to my workload by asking me to re-iterate what you missed. For those who do miss class for a legitimate reason I recommend that you ask a peer for their notes, do the readings and come and see me during office hours if you have any questions. Due dates for homework assignments will not be extended for absences (except under extenuating circumstances), so please make sure to consult with a friend in the class to make sure you complete everything on time.

**Email/Important Communication:** *Please type your name, course number, and section number into the titles of your emails. All communication should use only your GVSU student email account.* Emails that have no identifying information make me want to spontaneously combust into a ball of fire so hot that it's blue. In the case that you are notifying me about a medical condition, absence, or other important aspect of the course, please do so via email. I will always provide a confirmation note that I have received these types of email within 48 hours. If I have not done so, assume that I have not received your email and send another.

### **Student Responsibilities:**

**ACADEMIC INTEGRITY:** Grand Valley State University is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of GVSU in this respect. Students are particularly urged to familiarize themselves with the provisions of the *Code of Student Behavior* (online at <http://www.gvsu.edu/studentcode/index.cfm>) and avoid any behavior which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from GVSU. No student shall represent another's substantial editorial or compositional assistance on an assignment as their own. Furthermore, no student shall submit in any course or program of study, without the written approval of the course instructor, all or a substantial portion of any academic writing, essay, thesis, research report, project assignment, presentation or poster for which credit has been obtained by the student or which has previously been or is being submitted by the student in another course or program of study at GVSU or elsewhere. All forms of dishonesty are unacceptable at GVSU. Cheating, plagiarism and misrepresentation of facts are serious offenses. Anyone who engages in these practices will receive a grade of zero for the exam or paper in question, no opportunity will be given to replace the grade or redistribute the weights, and in the most egregious cases the student may receive up to an "F" for their overall course grade. In addition, any offense will be reported to the university who will determine if further disciplinary action should be taken.

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**ACADEMIC INTEGRITY AND YOUR RESEARCH PROPOSAL:** I strongly encourage students to discuss ideas related to the development of your research proposal together—science works best when done with others. It is inevitable that some of your proposal topics may overlap, which means you'll likely be writing about very similar literature. However, the research proposal is NOT a group activity, it is to be completed as an individual. Therefore, submitting identical proposals or proposals that contain identical portions of your classmates work with the excuse that “we worked on this together” is unacceptable. The Academic Integrity section above still applies.

**STUDENTS WITH DISABILITIES:** If there is any student in this class who has special needs because of a learning, physical, or other disability, please contact me and Disability Support Services (Room 200 STU; 616 331 2490). Furthermore, if you have a physical disability and think you will need assistance evacuating this classroom and/or building in an emergency, please make me aware so that I can develop a plan to assist you.

**ACADEMIC SUPPORT CENTRE:** Students who require additional help in developing strategies for better time management, writing, study or examination skills should contact the Advising Resource Centre (200 STU).

**General Course Policies:** This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies/>


*Disclaimer: This syllabus is subject to change. Any changes will be announced in class.*

<b>Tentative Lecture Schedule</b>		<b>Readings, Assignments, Due Dates</b>
<b>Week 1</b>		
<b>January 6</b>	Meet your professor / Course overview / Review syllabus	Read syllabus
<b>January 8</b>	Psychology as a Science	Chapter I.
<b>January 10</b>	Psychology as a Science	
<b>Week 2</b>		
<b>January 13</b>	Conducting Scientific Research <ul style="list-style-type: none"> <li>• Finding your topic</li> </ul>	Chapter II. <b>Research Proposal Assignment</b>
<b>January 15</b>	Conducting Scientific Research <ul style="list-style-type: none"> <li>• Searching the literature</li> </ul>	
<b>January 17</b>	Conducting Scientific Research <ul style="list-style-type: none"> <li>• Searching for more literature</li> </ul>	Searching the literature: Assignment 1

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<b>Week 3</b>		
<b>January 20</b>	**Martin Luther King Jr. Day (NO CLASS)**	**Martin Luther King Jr. Day (NO CLASS)**
<b>January 22</b>	Conducting Scientific Research <ul style="list-style-type: none"> <li>• Variables and operationalizing definitions</li> </ul>	
<b>January 24</b>	Generating (Good) Research Questions and Hypotheses from Theory <ul style="list-style-type: none"> <li>• For Your Research Proposal</li> <li>• Situating research in a theoretical framework</li> </ul>	Operational definitions, IVs, DVs, & hypotheses: Assignment 2
<b>Week 4</b>		
<b>January 27</b>	Data Analysis: Reporting results <ul style="list-style-type: none"> <li>• What to look for in the results section of the articles you read</li> </ul>	Chapter II.
<b>January 29</b>	Presenting Your Research <ul style="list-style-type: none"> <li>• Discuss how to write your research literature review</li> <li>• APA Style</li> </ul>	Chapter XI.
<b>January 31</b>	Presenting Your Research cont. <ul style="list-style-type: none"> <li>• Exam 1 review</li> </ul>	<b>Brief Proposal due</b>
<b>Week 5</b>		
<b>February 3</b>	<b>Exam 1</b>	
<b>February 5</b>	Research ethics	Chapter III.
<b>February 7</b>	Psychological Measurement	Chapter IV.
<b>Week 6</b>		
<b>February 10</b>	Psychological Measurement cont.	
<b>February 12</b>	Experimental Research: The basics	Chapter V.
<b>February 14</b>	Experimental Design cont.	
<b>Week 7</b>		
<b>February 17</b>	Experimental Design cont. <ul style="list-style-type: none"> <li>• Participant Recruitment</li> </ul>	
<b>February 19</b>	Non-Experimental Research <ul style="list-style-type: none"> <li>• Correlational research</li> </ul>	Chapter VI.

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<b>February 21</b>	Non-Experimental Research <ul style="list-style-type: none"> <li>observational and archival</li> </ul>	
<b>Week 8</b>		
<b>February 24</b>	Non-Experimental Research: <ul style="list-style-type: none"> <li>Qualitative data analyses</li> </ul>	Thematic analyses in-class activity and Assignment 3
<b>February 26</b>	Exam 2 review <ul style="list-style-type: none"> <li>Introduction / literature review, review</li> </ul>	
<b>February 28</b>	<b>EXAM 2</b>	<b>Research Proposal Introduction / literature review due</b>
<p style="text-align: center;"> <span style="display: inline-block; vertical-align: middle; text-align: center;">🌴</span> <b>**SPRING BREAK!!! MARCH 1 – 8<sup>th</sup>**</b> <span style="display: inline-block; vertical-align: middle; text-align: center;">🌴</span> </p> <p style="text-align: center;"><b>Week 9</b></p>		
<b>March 2</b>	<b>*NO CLASS*</b>	
<b>March 4</b>	<b>*NO CLASS*</b>	
<b>March 6</b>	<b>*NO CLASS*</b>	
<b>Week 10</b>		
<b>March 9</b>	Survey Research <ul style="list-style-type: none"> <li>Self-report measures</li> </ul>	Chapter VII.
<b>March 11</b>	Survey Research <ul style="list-style-type: none"> <li>Survey design</li> </ul>	Chapter VII. Identifying and correcting bad question items: Assignment 4
<b>March 13</b>	Quasi-Experimental Research <ul style="list-style-type: none"> <li>One-group designs</li> </ul>	Chapter VIII.
<b>Week 11</b>		
<b>March 16</b>	Quasi-Experimental Research <ul style="list-style-type: none"> <li>Non-equivalent groups designs</li> </ul>	

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<b>March 18</b>	Factorial Research Designs <ul style="list-style-type: none"> <li>• Writing methods / results review</li> </ul>	Chapter IX.
<b>March 20</b>	Factorial Research Designs cont.	<b><i>Research Proposal Method / Results section due</i></b>
<b>Week 12</b>		
<b>March 23</b>	Single-Subject Research Designs	Chapter X.
<b>March 25</b>	Descriptive Statistics <ul style="list-style-type: none"> <li>• Reading graphs</li> <li>• Statistical concepts (e.g., variability)</li> </ul>	Chapter XII.
<b>March 27</b>	Research proposal writing lecture / help	
<b>Week 13</b>		
<b>March 30</b>	Exam 3 review <ul style="list-style-type: none"> <li>• Research proposal writing lecture / help session</li> </ul>	
<b>April 1</b>	<b><i>Exam 3</i></b>	
<b>April 3</b>	Inferential Statistics	Chapter XVIII
<b>Week 14</b>		
<b>April 6</b>	Inferential Statistics	<b><i>Research Proposal Abstract due</i></b>
<b>April 8</b>	Major Challenges in Scientific Research <ul style="list-style-type: none"> <li>• Introducing Open Science practices</li> </ul>	
<b>April 10</b>	Open Science practices cont.	
<b>Week 15</b>		
<b>April 13</b>	Lecture & discussion: Finalizing your research proposal	
<b>April 15</b>	Exam 4 review <ul style="list-style-type: none"> <li>• Class reflection / discussion</li> </ul>	
<b>April 17</b>	<b><i>Exam 4</i></b>	<b><i>PAPER copy of your Final Research Proposal is due!</i></b>
<b>Week 16 (Finals Week)</b>		



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<b>April 20</b>	No Class; No office hours
<b>April 22</b>	No Class; No office hours. This class does not meet during Finals Week. Handing in your Final Research Proposal <i>IS</i> your Final.
<b>April 24</b>	No Class; No office hours

*\* You are responsible for understanding the content of the assigned reading, regardless of whether this content is discussed in class.*

### **RESEARCH PROPOSAL (Draft/Final copy)**

#### **Research Proposal Objectives**

The research proposal in this class is designed to stimulate critical scientific thinking and to introduce you to a new area of psychology while simultaneously developing your understanding of research methods and introducing you to APA format and proper standards in scientific writing. Discussing the content and development of your proposal with other students is encouraged, however the assignment is to be completed by each student individually (i.e., this is NOT a group project). In this assignment you will propose a study that will test a novel hypothesis. We will dedicate at least 4 class hours toward writing instruction, focused on the development of your research proposal. In some cases, you may be able to work on the proposal in class, but most of the writing and reading required to complete this will occur out of class (i.e., this is homework you are responsible for). Completing this project will involve a series of sequential steps that will lead you to your final product; An 8-12 page APA style paper that will outline the theoretical rationale, proposed methods, results (expected), and conclusions pertinent to your research question.

**Feedback on Research Proposal Draft:** Unless otherwise noted, you will receive feedback within one week of submitting your Research Proposal Draft Assignments. Opportunities for revision occur throughout the course, until the submission of your final copy.

#### **Description of Research Proposal**

You propose a novel research study and, in doing so, will conduct a literature review and utilize psychological theory and your knowledge of research methods to test a hypothesis that follows from a research question that you are interested in. Your research question should be relevant to one (or more) of the following broad topic areas: 1) Autism spectrum (clinical diagnoses) and the broad autism phenotype. 2) Moral psychology. 3) The psychology of religion and nonreligious worldviews. We will discuss these in greater depth during the class, but the goal is for your research question to be unique to your own interests. In other words, I want to help you pursue a research topic that is meaningful to you, and other topics may be suitable for your research proposal with my approval. Both the development of your idea and the process of

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writing an APA style research report will occur through in-class lectures and group discussions, homework assignments (below), and iterative feedback on your proposal drafts.

*Brief Proposal* – Drawing from personal interest, popular media, reputable news outlets, or class lecture, submit two paragraphs outlining two topics in psychology that you are interested in and may serve as the topic of your research proposal (e.g. Autism spectrum, Moral psychology, Religion/nonreligion). In your description of these two topics, you need to stipulate what your independent and dependent variables might be, provide operational definitions of these variables and explain the importance of understanding this topic for the betterment of society.

### **Research Proposal Draft / final copy**

You must propose an *experimental* or *quasi-experimental* design to test your hypothesis. The proposed study should predict an *interaction* and contain two independent variables. One or both of these variables *should be manipulated*. (That is, there should be a treatment and a control condition.) Your *independent* variables can be categorical (nominal) or continuous (ratio, interval or ordinal), but your dependent variable must be continuous. You are permitted to use one non-manipulated variable if it suits your design (i.e., age, self-esteem, gender, personality characteristics).

Your proposed study in APA manuscript format. Include a cover page (title, header, running head, page numbers, authors, institution affiliation etc.) abstract, introduction, methods, proposed results (with or without illustrative table), and a reference section. You do not need a discussion section at this point, but feel free to include one if you're feeling keen.

What I am expecting is a draft of an APA paper. In each section, simply provide an effective description of what you're planning. I am not expecting that this draft be perfect, but the more comprehensive it is, the better feedback (and grade) you will get.

*Abstract* – 150-250 word summary of the project

*Introduction / literature review* – An introduction describing previous literature in the area and the relevance of what you want to do. End this section with a summary of the literature reviewed, your research question, and predictions. The draft introduction / literature review should be between 3-4 pages.

*Method* – Describe the sample of participants you will recruit for the study. Tell me what type of design you are using (within/between subjects?); What materials will you use (e.g., anxiety induction techniques, galvanic skin response, self-report scales, etc.); What is the experimental procedure?

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Hint: While you are not going to actually run this study, I do expect that you make an effort to propose something that would be reasonable to do in real life, if you had a grant from GVSU to undertake the research.

*Results (expected)* – What are you expecting to find? Be sure to predict an interaction between your two independent variables. Please provide a fake graph or table of your predicted results. You do not need to describe your data analysis techniques in this draft.

*Discussion* – While it should be clear from your introduction, you could include a paragraph on why finding the predicted results would be important. This is an **optional** section for this assignment.

References – Use in-text citations throughout the paper and include an APA format references section.